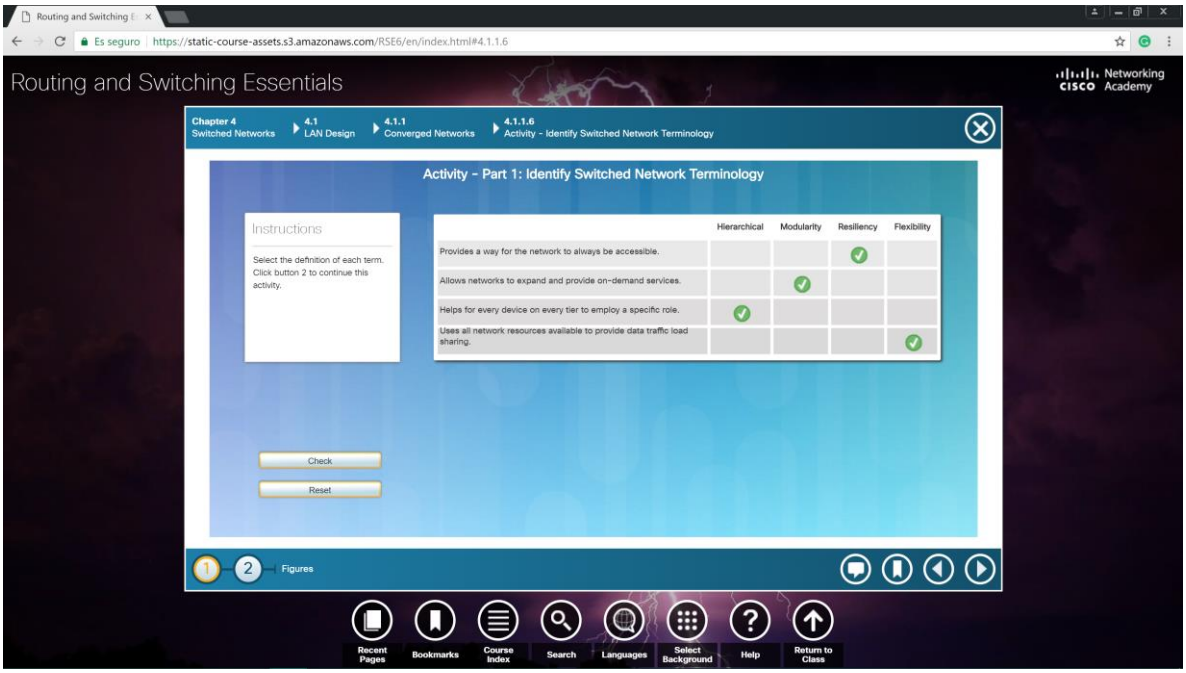
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4.1 LAN Design
4.1.1 Converged Networks
4.1.1.6 Activity - Identify Switched Network Terminology
Activity - Part 1: Identify Switched Network Terminology
Instructions
Select the definition of each term. Click button 2 to continue this activity.
Hierarchical
Modularity
Resiliency
Flexibility
Provides a way for the network to always be accessible.
Allows networks to expand and provide on-demand services.
Helps for every device on every tier to employ a specific role.
Uses all network resources available to provide data traffic load sharing.
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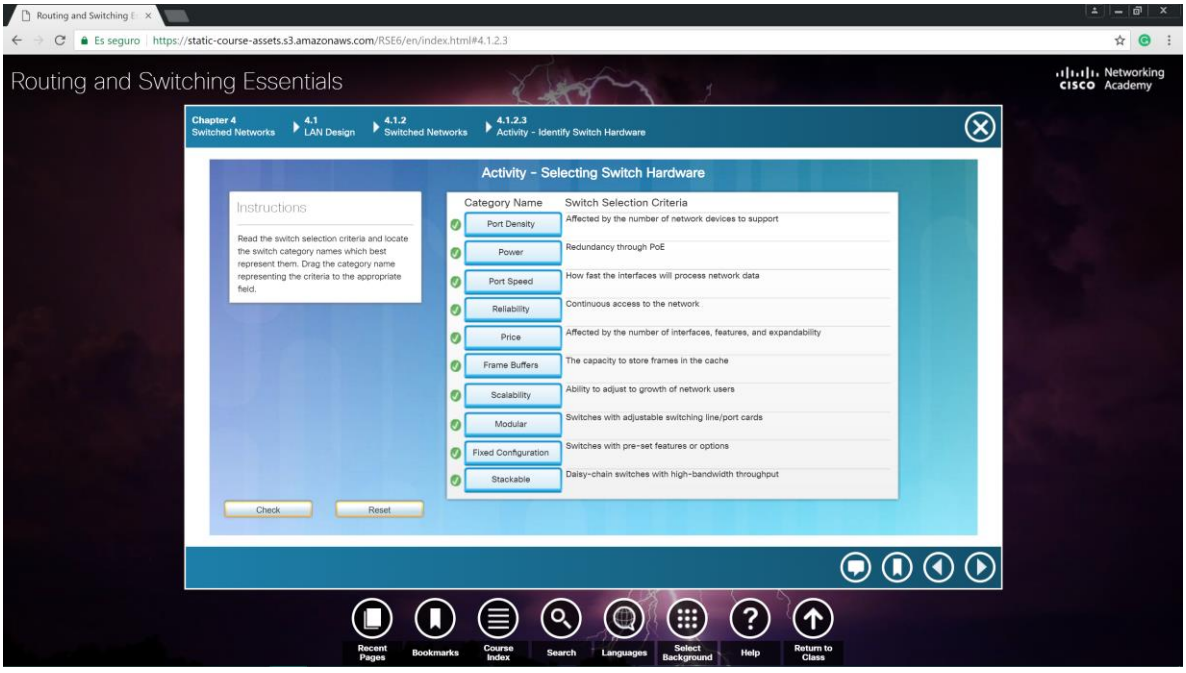
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4.1.2 Switched Networks
4.1.2.3 Activity - Identify Switch Hardware
Activity - Selecting Switch Hardware
Instructions
Read the switch selection criteria and locate the switch category names which best represent them. Drag the category name representing the criteria to the appropriate field.
Category Name
Switch Selection Criteria
Port Density
Affected by the number of network devices to support
Power
Redundancy through PoE
Port Speed
How fast the interfaces will process network data
Reliability
Continuous access to the network
Price
Affected by the number of interfaces, features, and expandability
Frame Buffers
The capacity to store frames in the cache
Scalability
Ability to adjust to growth of network users
Modular
Switches with adjustable switching line/port cards
Fixed Configuration
Switches with pre-set features or options
Stackable
Daisy-chain switches with high-bandwidth throughput
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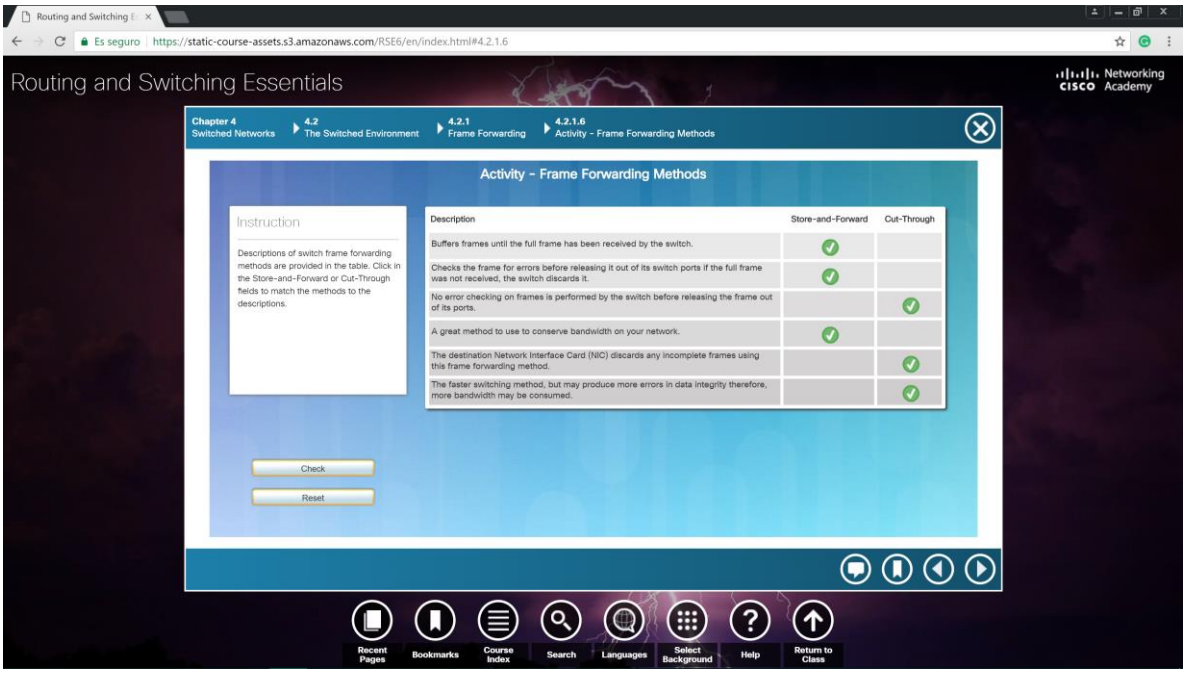
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4.2 The Switched Environment
4.2.1 Frame Forwarding
4.2.1.6 Activity - Frame Forwarding Methods
Activity - Frame Forwarding Methods
Instruction
Descriptions of switch frame forwarding methods are provided in the table. Click in the Store-and-Forward or Cut-Through fields to match the methods to the descriptions.
Description
Store-and-Forward
Cut-Through
Buffers frames until the full frame has been received by the switch.
Checks the frame for errors before releasing it out of its switch ports if the full frame was not received, the switch discards it.
No error checking on frames is performed by the switch before releasing the frame out of its ports.
A great method to use to conserve bandwidth on your network.
The destination Network Interface Card (NIC) discards any incomplete frames using this frame forwarding method.
The faster switching method, but may produce more errors in data integrity therefore, more bandwidth may be consumed.
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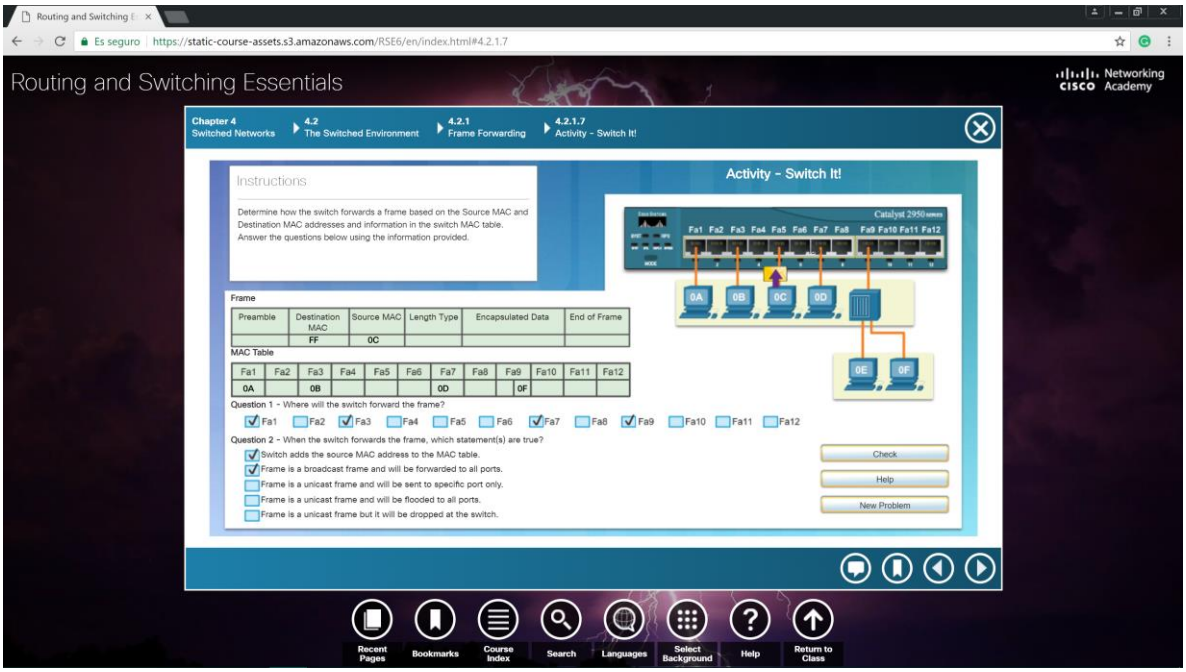
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4.2 The Switched Environment
4.2.1 Frame Forwarding
4.2.1.7 Activity - Switch It!
Activity - Switch It!
Instructions
Determine how the switch forwards a frame based on the Source MAC and Destination MAC addresses and information in the switch MAC table. Answer the questions below using the information provided.
Catalyst 2950
Fa1 Fa2 Fa3 Fa4 Fa5 Fa6 Fa7 Fa8 Fa9 Fa10 Fa11 Fa12
0A
0B
0C
0D
0E
0F
Frame
Preamble
Destination MAC
Source MAC
Length Type
Encapsulated Data
End of Frame
FF
0C
MAC Table
Fa1 Fa2 Fa3 Fa4 Fa5 Fa6 Fa7 Fa8 Fa9 Fa10 Fa11 Fa12
0A 0B 0D 0F
Question 1 - Where will the switch forward the frame?
Fa1 Fa2 Fa3 Fa4 Fa5 Fa6 Fa7 Fa8 Fa9 Fa10 Fa11 Fa12
Question 2 - When the switch forwards the frame, which statement(s) are true?
Switch adds the source MAC address to the MAC table.
Frame is a broadcast frame and will be forwarded to all ports.
Frame is a unicast frame and will be sent to specific port only.
Frame is a unicast frame and will be flooded to all ports.
Frame is a unicast frame but it will be dropped at the switch.
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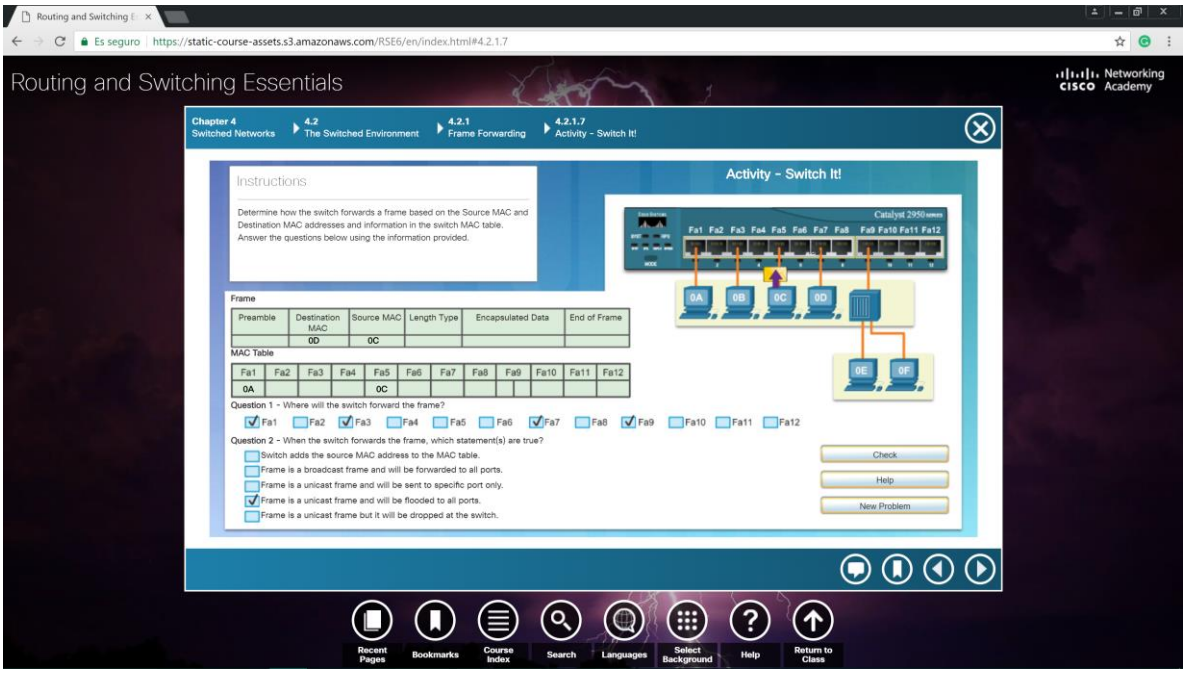
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Activity - Switch It!
Instructions
Determine how the switch forwards a frame based on the Source MAC and Destination MAC addresses and information in the switch MAC table. Answer the questions below using the information provided.
Frame
Preamble | Destination MAC | Source MAC | Length Type | Encapsulated Data | End of Frame
0D | 0C
MAC Table
Fa1 | Fa2 | Fa3 | Fa4 | Fa5 | Fa6 | Fa7 | Fa8 | Fa9 | Fa10 | Fa11 | Fa12
0A | 0C
Question 1 - Where will the switch forward the frame?
Fa1 Fa2 Fa3 Fa4 Fa5 Fa6 Fa7 Fa8 Fa9 Fa10 Fa11 Fa12
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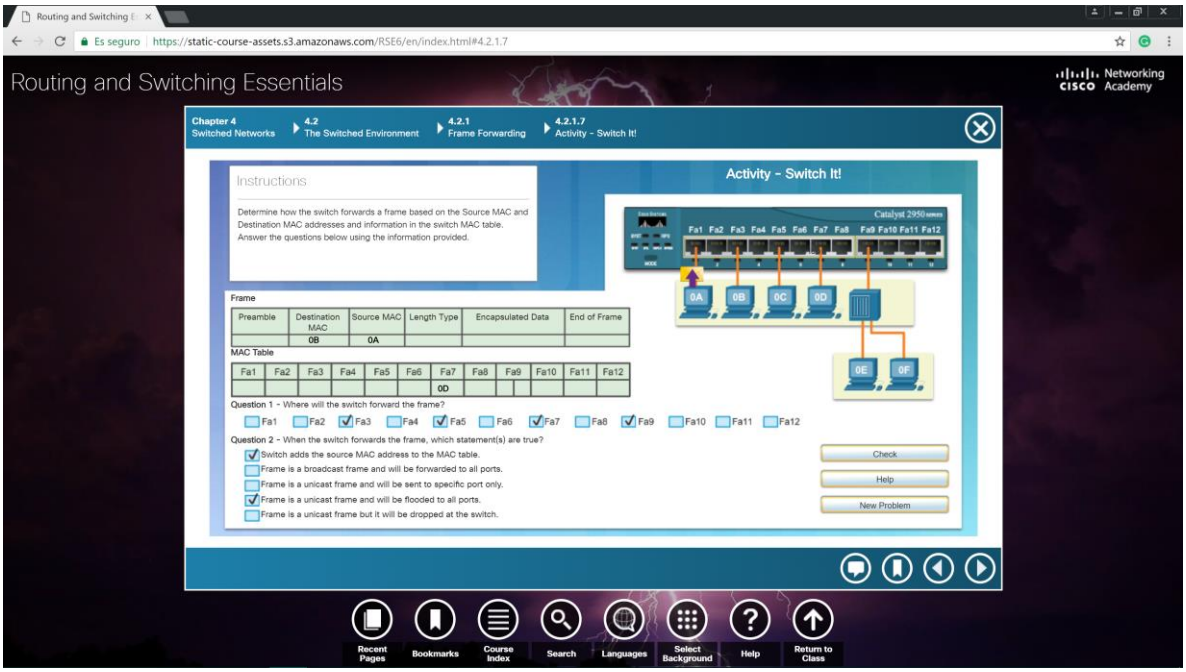
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Activity - Switch It!
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Determine how the switch forwards a frame based on the Source MAC and Destination MAC addresses and information in the switch MAC table. Answer the questions below using the information provided.
Frame
Preamble | Destination MAC | Source MAC | Length Type | Encapsulated Data | End of Frame
0B | 0A
MAC Table
Fa1 | Fa2 | Fa3 | Fa4 | Fa5 | Fa6 | Fa7 | Fa8 | Fa9 | Fa10 | Fa11 | Fa12
0D
Question 1 - Where will the switch forward the frame?
Fa1 Fa2 Fa3 Fa4 Fa5 Fa6 Fa7 Fa8 Fa9 Fa10 Fa11 Fa12
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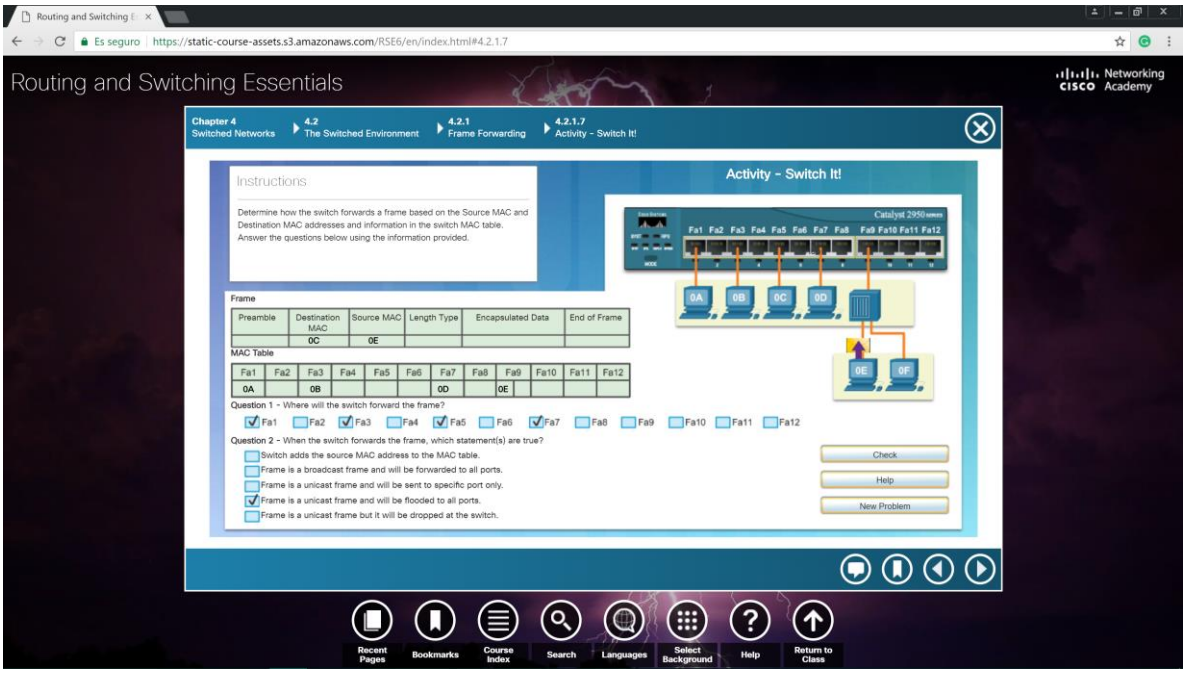
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Activity - Switch It!
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Frame
Preamble | Destination MAC | Source MAC | Length Type | Encapsulated Data | End of Frame
0C | 0E
MAC Table
Fa1 | Fa2 | Fa3 | Fa4 | Fa5 | Fa6 | Fa7 | Fa8 | Fa9 | Fa10 | Fa11 | Fa12
0A | 0B | 0D | 0E
Question 1 - Where will the switch forward the frame?
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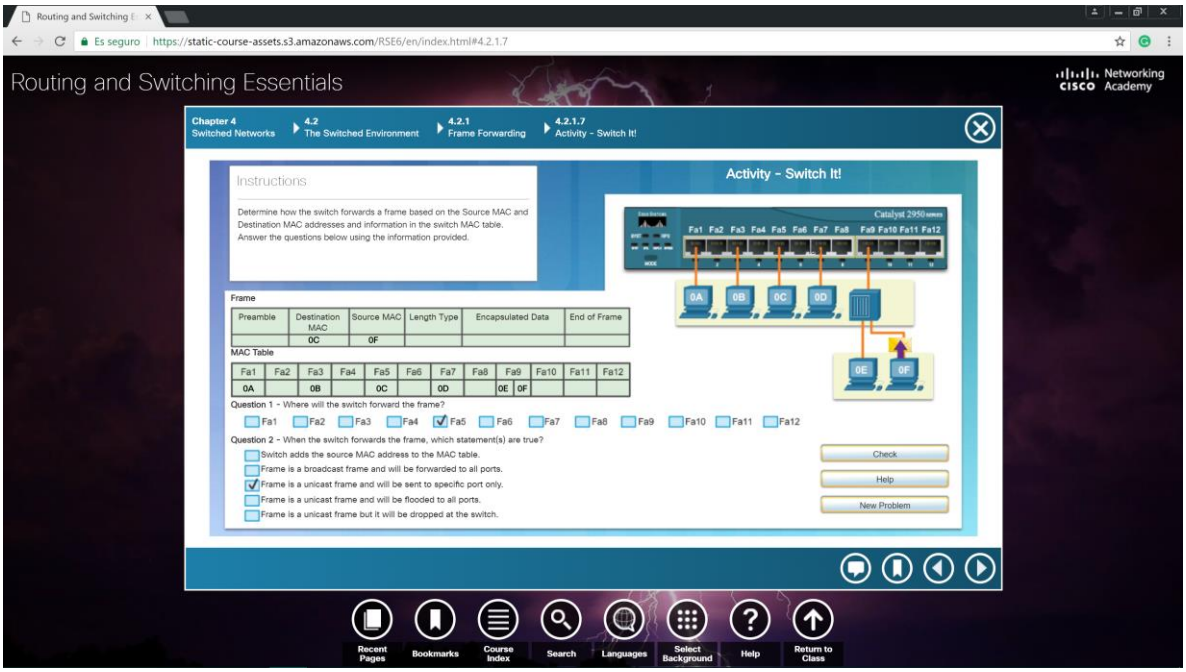
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Activity - Switch It!
Instructions
Determine how the switch forwards a frame based on the Source MAC and Destination MAC addresses and information in the switch MAC table. Answer the questions below using the information provided.
Frame
Preamble | Destination MAC | Source MAC | Length Type | Encapsulated Data | End of Frame
0C | 0F
MAC Table
Fa1 | Fa2 | Fa3 | Fa4 | Fa5 | Fa6 | Fa7 | Fa8 | Fa9 | Fa10 | Fa11 | Fa12
0A | 0B | 0C | 0D | 0E | 0F
Question 1 - Where will the switch forward the frame?
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